

# Dell™ Inspiron™ 300/400 Service Manual

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## Notes, Cautions, and Warnings



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



**WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Regulatory Model D02U series

Regulatory Type D02U001 and D02U002

September 2009

Rev. A00

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## Before You Begin

### Dell™ Inspiron™ 300/400 Service Manual

- [Recommended Tools](#)
- [Turning Off Your Computer](#)
- [Safety Instructions](#)

This manual provides procedures for removing and installing the components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- 1 You have performed the steps in [Turning Off Your Computer](#) and [Safety Instructions](#).
- 1 You have read the safety information that shipped with your computer.
- 1 A component can be replaced or—if purchased separately—installed by performing the removal procedure in reverse order.

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## Recommended Tools

The procedures in this document may require the following tools:

- 1 Small Phillips screwdriver
- 1 Hex nut driver
- 1 Flash BIOS executable update program at [support.dell.com](http://support.dell.com)

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## Turning Off Your Computer



 **CAUTION:** To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Save and close all open files and exit all open programs.
2. Shut down the operating system:

*Windows® XP:*

Click **Start**→ **Shut Down**→ **Shut down**.

*Windows Vista®:*

Click the **Start** button  , click the arrow  , and then click **Shut Down**.

*Windows 7:*





Click the **Start** button  and then click **Shut Down**.


3. Ensure that the computer is turned off. If your computer did not automatically turn off when you shut down your operating system, press and hold the power button until the computer turns off.


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## Safety Instructions

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your own personal safety.

-  **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **WARNING:** Disconnect all power sources before opening the enclosure to replace, remove, or install accessories. After the installation is completed, the enclosure must be replaced and all fasteners installed before connecting to the power source.
-  **CAUTION:** Only a certified service technician is authorized to remove the computer cover and access any of the components inside the computer. See the safety instructions for complete information about safety precautions, working inside your computer, and protecting against electrostatic discharge.
-  **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

 **CAUTION:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

 **CAUTION:** To avoid damaging the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see [Turning Off Your Computer](#)) and all attached devices.

 **CAUTION:** To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

3. Disconnect all telephone or network cables from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets.
5. Disconnect all attached devices from your computer.
6. Press and hold the power button while the system is unplugged to ground the system board.

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# Bottom Cover

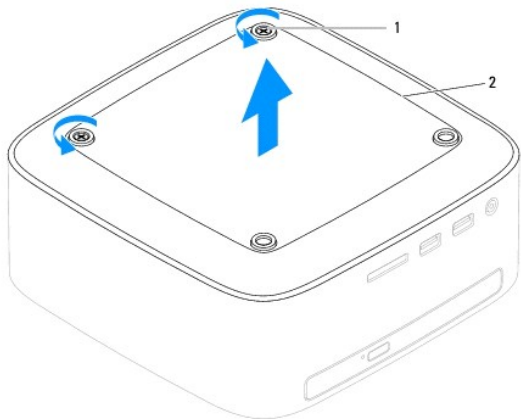
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Bottom Cover](#)
- [Replacing the Bottom Cover](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Bottom Cover

1. Follow the procedures in [Before You Begin](#).
2. Turn the computer over.
3. Loosen the two captive screws that secure the bottom cover to the chassis.
4. Lift the bottom cover off the computer base.



1	captive screws (2)	2	bottom cover
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## Replacing the Bottom Cover

1. Follow the procedures in [Before You Begin](#).
2. Align the screw holes on the bottom cover with the screw holes on the chassis.
3. Tighten the two captive screws that secure the bottom cover to the chassis.

- CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.
4. Connect your computer and all attached devices to electrical outlets, and turn them on.



## Wireless Mini-Card (Inspiron 400 Only)

### Dell™ Inspiron™ 300/400 Service Manual

• [Removing the Mini-Card](#)

• [Replacing the Mini-Card](#)

**WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

**CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

**CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

**NOTE:** Dell does not guarantee compatibility or provide support for Mini-Cards from sources other than Dell.

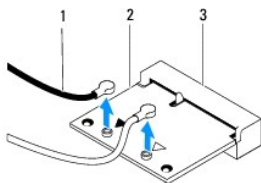
If you ordered a wireless Mini-Card with your computer, the card is already installed.

Your computer supports one half Mini-Card slot for Wireless Local Area Network (WLAN).

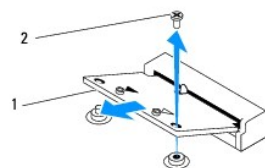
## Removing the Mini-Card

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Disconnect the antenna cables from the Mini-Card.
7. Remove the screw that secures the Mini-Card to the system-board connector.
8. Lift the Mini-Card away from the system-board connector.

**CAUTION:** When the Mini-Card is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).




1	antenna cables (2)	2	Mini-Card
3	system-board connector		




1	Mini-Card	2	screw
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## Replacing the Mini-Card


 **CAUTION:** The connectors are keyed to ensure correct insertion. Use of excessive force may damage the connectors.

 **CAUTION:** To avoid damage to the Mini-Card, ensure that there are no cables or antenna cables under the Mini-Card.

1. Follow the procedures in [Before You Begin](#).
2. Align the notch on the Mini-Card with the tab in the system-board connector.
3. Insert the Mini-Card at a 45-degree angle into the system-board connector.
4. Press the other end of the Mini-Card down. Replace the screw that secures the Mini-Card to the system-board connector.
5. Connect the appropriate antenna cables to the Mini-Card you are installing. The following table provides the antenna cable color scheme for the Mini-Card supported by your computer.

Connectors on the Mini-Card	Antenna Cable Color Scheme
<b>WLAN (2 antenna cables)</b>	
Main WLAN (white triangle)	white
Auxiliary WLAN (black triangle)	black

6. Replace the drive bay (see [Replacing the Drive Bay](#)).
7. Replace the optical drive (see [Replacing the Optical Drive](#)).
8. Replace the top bracket (see [Replacing the Top Bracket](#)).
9. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

10. Connect your computer and all attached devices to electrical outlets, and turn them on.

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# Coin-Cell Battery

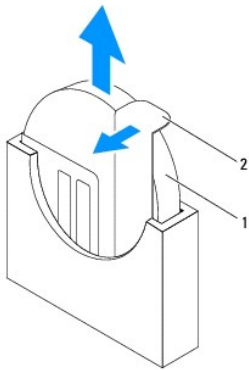
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Coin-Cell Battery](#)
- [Replacing the Coin-Cell Battery](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- WARNING:** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Coin-Cell Battery

1. Record all the screens in system setup utility (see [System Setup Utility](#)) so that you can restore the correct settings in [step 8](#).
2. Follow the procedures in [Before You Begin](#).
3. Remove the top cover (see [Removing the Top Cover](#)).
4. Remove the top bracket (see [Removing the Top Bracket](#)).
5. Remove the optical drive (see [Removing the Optical Drive](#)).
6. Remove the drive bay (see [Removing the Drive Bay](#)).
7. Place the computer with the coin-cell battery facing towards you.
8. Carefully pull the release lever away from the coin-cell battery and lift the coin-cell battery out of the socket.




1	coin-cell battery	2	release lever
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## Replacing the Coin-Cell Battery

1. Follow the procedures in [Before You Begin](#).
2. Insert the new coin-cell battery into the socket with the side labeled "+" facing left.
3. Replace the drive bay (see [Replacing the Drive Bay](#)).
4. Replace the optical drive (see [Replacing the Optical Drive](#)).



5. Replace the top bracket (see [Replacing the Top Bracket](#)).
6. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

7. Connect your computer and devices to electrical outlets, and then turn them on.
8. Enter the system setup utility (see [System Setup Utility](#)) and restore the settings you recorded in [step 1](#).

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## Graphics Card (Inspiron 400 Only)

### Dell™ Inspiron™ 300/400 Service Manual

● [Removing the Graphics Card](#)

● [Replacing the Graphics Card](#)

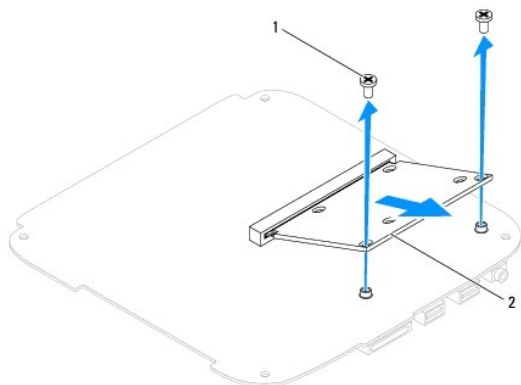
**WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

**CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

**CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Graphics Card

1. Follow the procedures in [Before You Begin](#).
2. Remove the bottom cover (see [Removing the Bottom Cover](#)).
3. Remove the graphics-card heat sink (see [Removing the Graphics-Card Heat Sink](#)).
4. Remove the two screws that secure the graphics card to the system board.
5. Remove the graphics card from the graphics card connector.



1	screws (2)	2	graphics card
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## Replacing the Graphics Card

1. Follow the procedures in [Before You Begin](#).
2. Align the notch on the graphics card with the tab in the system-board connector.
3. Insert the graphics card at a 45-degree angle into the system board connector.
4. Press the other end of the graphics card down. Replace the two screws that secure the graphics card to the system-board connector.
5. Replace the graphics-card heat sink (see [Replacing the Graphics-Card Heat Sink](#)).
6. Replace the bottom cover (see [Replacing the Bottom Cover](#)).

**CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

7. Connect your computer and all attached devices to electrical outlets, and turn them on.

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## Graphics-Card Fan (Inspiron 400 Only)

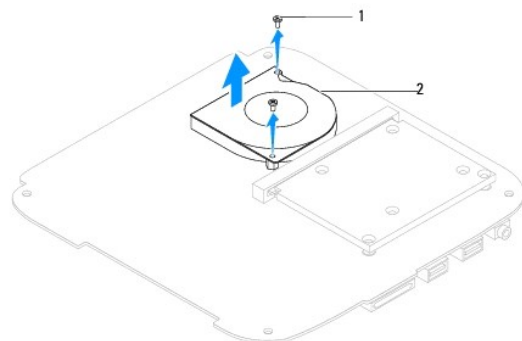
### Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Graphics-Card Fan](#)
- [Replacing the Graphics-Card Fan](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
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## Removing the Graphics-Card Fan

1. Follow the procedures in [Before You Begin](#).
2. Remove the bottom cover (see [Removing the Bottom Cover](#)).
3. Remove the graphics-card heat sink (see [Removing the Graphics-Card Heat Sink](#)).
4. Remove the two screws that secure the graphics-card fan to the system board.
5. Lift the graphics-card fan out of the computer.



1	screws (2)	2	graphics-card fan
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## Replacing the Graphics-Card Fan

1. Follow the procedures in [Before You Begin](#).
  2. Align the screw holes on the graphics-card fan with the screw holes on the system board. Replace the two screws that secure the graphics-card fan to the system board.
  3. Replace the graphics-card heat sink (see [Replacing the Graphics-Card Heat Sink](#)).
  4. Replace the bottom cover (see [Replacing the Bottom Cover](#)).
- CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.
5. Connect your computer and all attached devices to electrical outlets, and turn them on.
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## Graphics-Card Heat Sink (Inspiron 400 Only)

### Dell™ Inspiron™ 300/400 Service Manual

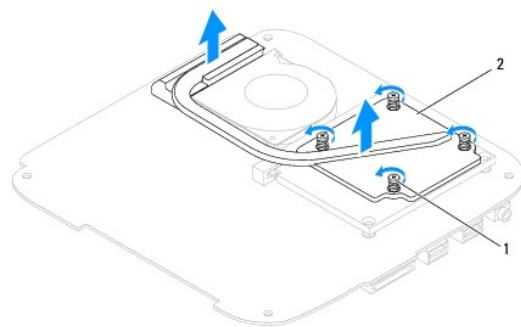
- [Removing the Graphics-Card Heat Sink](#)
- [Replacing the Graphics-Card Heat Sink](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- WARNING:** The heat sink may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
- CAUTION:** Do not perform the following steps unless you are familiar with hardware removal and replacement. Performing these steps incorrectly could damage your system board. For technical service information, see the *Setup Guide*.

## Removing the Graphics-Card Heat Sink

1. Follow the procedures in [Before You Begin](#).
2. Remove the bottom cover (see [Removing the Bottom Cover](#)).

- CAUTION:** To ensure maximum cooling for the graphics processor, do not touch the heat transfer areas on the graphics-card heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.
3. In sequential order (indicated on the graphics-card heat sink), loosen the four captive screws in descending order that secure the graphics-card heat sink to the system board.
  4. Lift the graphics-card heat sink away from the computer.



1	captive screws (4)	2	graphics-card heat sink
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## Replacing the Graphics-Card Heat Sink

1. Follow the procedures in [Before You Begin](#).
2. Align the four captive screws on the graphics-card heat sink with the screw holes on the system board and tighten the screws in ascending order.
3. Replace the bottom cover (see [Replacing the Bottom Cover](#)).

- CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.
4. Connect your computer and all attached devices to electrical outlets, and turn them on.

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# Hard Drive

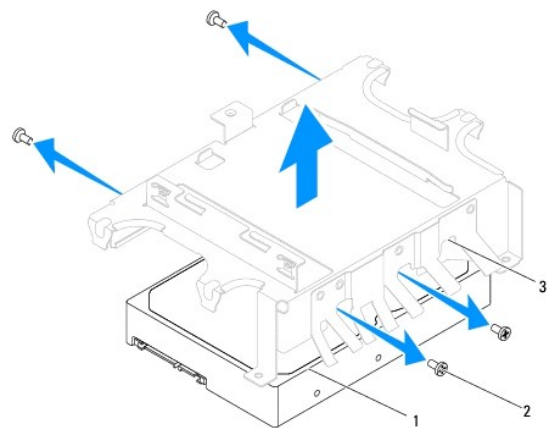
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Hard Drive](#)
- [Replacing the Hard Drive](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- WARNING:** If you remove the hard drive from the computer when the drive is hot, do not touch the metal housing of the hard drive.
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
- CAUTION:** To prevent data loss, turn off your computer (see [Turning Off Your Computer](#)) before removing the hard drive. Do not remove the hard drive while the computer is On or in Sleep state.
- CAUTION:** Hard drives are extremely fragile. Exercise care when handling the hard drive.
- NOTE:** Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.
- NOTE:** If you are installing a hard drive from a source other than Dell, you need to install an operating system, drivers, and utilities on the new hard drive (see the *Dell Technology Guide*).

## Removing the Hard Drive

1. Follow the procedures in [Before You Begin](#).
  2. Remove the top cover (see [Removing the Top Cover](#)).
  3. Remove the top bracket (see [Removing the Top Bracket](#)).
  4. Remove the optical drive (see [Removing the Optical Drive](#)).
  5. Remove the drive bay (see [Removing the Drive Bay](#)).
- CAUTION:** When the hard drive is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).
6. Remove the four screws that secure the hard drive to the drive bay.
  7. Lift the drive bay off the hard drive.



1	hard drive	2	screws (4)
3	drive bay		



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## Replacing the Hard Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the new hard drive from its packaging.  
Save the original packaging for storing or shipping the hard drive.
3. Align the screw holes on the drive bay with the screw holes on the hard drive.
4. Replace the four screws that secure the hard drive to the drive bay.
5. Replace the drive bay (see [Replacing the Drive Bay](#)).
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

9. Connect your computer and all attached devices to electrical outlets, and turn them on.
10. Install the operating system for your computer, as needed. See "Restoring Your Operating System" in the *Setup Guide*.
11. Install the drivers and utilities for your computer, as needed. For more information, see the *Dell Technology Guide*.

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# Drive Bay

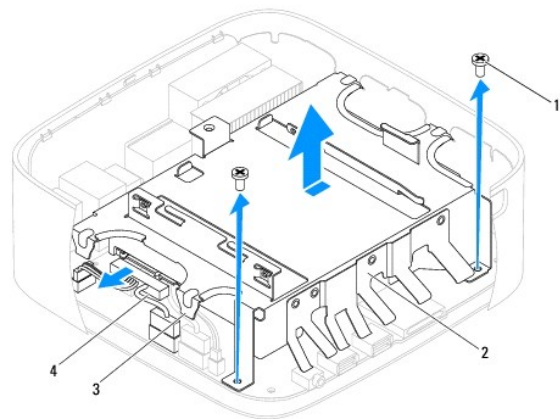
Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Drive Bay](#)
- [Replacing the Drive Bay](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Drive Bay

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the screw that secures the power-button bracket to the drive bay (see [Removing the Power-Button Bracket](#)).
6. Remove the two screws that secure the drive bay to the system board.
7. Slide the drive bay to the back and lift the drive bay to access the hard-drive cable.
8. Disconnect the hard-drive cable from the connector on the hard drive.
9. Carefully lift the drive bay away from the computer.




1	screws (2)	2	drive bay
3	tabs (4)	4	hard-drive cable connector

## Replacing the Drive Bay

1. Follow the procedures in [Before You Begin](#).
2. Connect the hard-drive cable to the connector on the hard drive.

3. Align the tabs on the drive bay with the slots on the chassis. Slide the drive bay to align the screw holes on the drive bay with the screws holes on the system board.
4. Replace the two screws that secure the drive bay to the system board.
5. Replace the screw that secures the power-button bracket to the drive bay (see [Replacing the Power-Button Bracket](#)).
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

9. Connect your computer and all attached devices to electrical outlets, and turn them on.

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## Processor Heat Sink (Inspiron 400 Only)

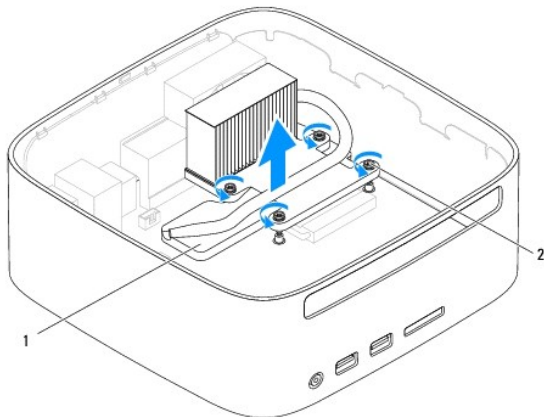
### Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Processor Heat Sink](#)
- [Replacing the Processor Heat Sink](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- WARNING:** The heat sink may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
- CAUTION:** Do not perform the following steps unless you are familiar with hardware removal and replacement. Performing these steps incorrectly could damage your system board. For technical service information, see the *Setup Guide*.


## Removing the Processor Heat Sink


1. Follow the procedures in [Before You Begin](#).
  2. Remove the top cover (see [Removing the Top Cover](#)).
  3. Remove the top bracket (see [Removing the Top Bracket](#)).
  4. Remove the optical drive (see [Removing the Optical Drive](#)).
  5. Remove the drive bay (see [Removing the Drive Bay](#)).
- CAUTION:** To ensure maximum cooling for the processor, do not touch the heat transfer areas on the processor heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.
6. In sequential order (indicated on the processor heat sink), loosen the four captive screws in descending order that secure the processor heat sink to the system board.
  7. Carefully lift the processor heat sink away from the computer.
  8. Lay the processor heat sink down on its top, with the thermal grease facing upward.




1	processor heat sink	2	captive screws (4)
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## Replacing the Processor Heat Sink


 **CAUTION:** Incorrect alignment of the processor heat sink can cause damage to the system board and processor.

 **NOTE:** The original thermal grease can be reused if the original processor and processor heat sink are reinstalled together. If either the processor or the processor heat sink is replaced, use the thermal grease provided in the kit to ensure that thermal conductivity is achieved.

1. Follow the procedures in [Before You Begin](#).
2. Clean the thermal grease from the bottom of the processor heat sink.

 **CAUTION:** Ensure that you apply new thermal grease. New thermal grease is critical for ensuring adequate thermal bonding, which is a requirement for optimal processor operation.

3. Apply the new thermal grease to the top of the processor.
4. Align the four captive screws on the processor heat sink with the screw holes on the system board and tighten the screws in ascending order.
5. Replace the drive bay (see [Replacing the Drive Bay](#)).
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

9. Connect your computer and devices to electrical outlets, and then turn them on.

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# I/O Bracket

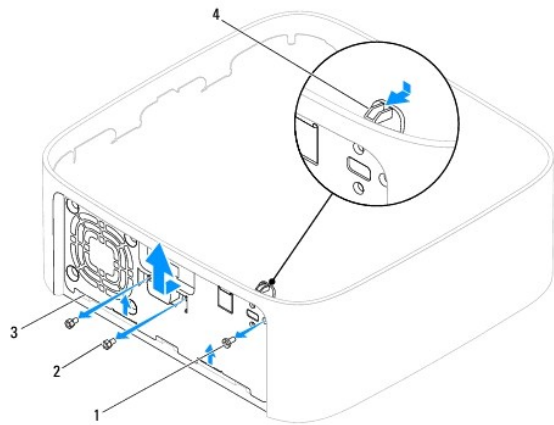
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the I/O Bracket](#)
- [Replacing the I/O Bracket](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the I/O Bracket

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
5. Remove the chassis fan (see [Removing the Chassis Fan](#)).
6. Using a hex nut driver, remove the two screws that secure the VGA connector to the I/O bracket.
7. Remove the screw that secures the I/O bracket to the chassis.
8. Carefully press and release the security lock latch on the I/O bracket out of the computer cover and lift the I/O bracket out of the computer.




1	screw	2	hex nut screws (2)
3	I/O bracket	4	security lock latch

## Replacing the I/O Bracket

1. Follow the procedures in [Before You Begin](#).
2. Slide the tabs on the bottom of the I/O bracket into the slots on the chassis.
3. Carefully press and slide the security lock latch into place. Replace the screw that secures the I/O bracket to the chassis.

4. Using a hex nut driver, replace the two screws that secure the VGA connector to the I/O bracket.
5. Replace the chassis fan (see [Replacing the Chassis Fan](#)).
6. Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

9. Connect your computer and all attached devices to electrical outlets, and turn them on.

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## I/O Bezel

### Dell™ Inspiron™ 300/400 Service Manual

● [Removing the I/O Bezel](#)

● [Replacing the I/O Bezel](#)

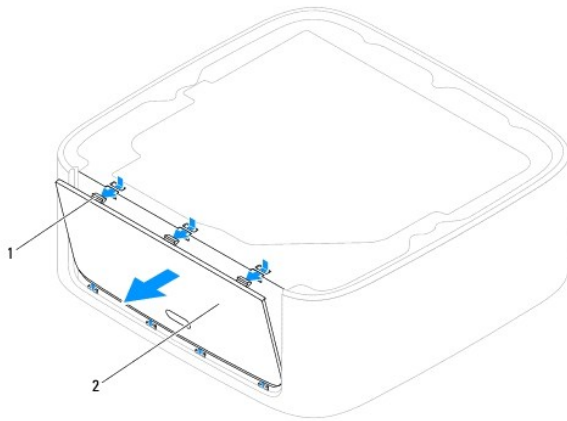
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**CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

**CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the I/O Bezel

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the bottom cover (see [Removing the Bottom Cover](#)).
4. Press and release the tabs on the bottom of the I/O bezel from the slots on the chassis and lift the I/O bezel out of the computer.



1	tabs (3)	2	I/O bezel
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## Replacing the I/O Bezel

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the I/O bezel with the slots on the computer and snap into place.
3. Replace the bottom cover (see [Replacing the Bottom Cover](#)).
4. Replace the top cover (see [Replacing the Top Cover](#)).

**CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

5. Connect your computer and all attached devices to electrical outlets, and turn them on.



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# Memory Module(s)

## Dell™ Inspiron™ 300/400 Service Manual

- [Inspiron 300](#)
- [Inspiron 400](#)

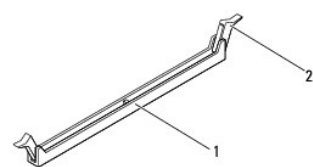
- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
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## Inspiron 300

### Removing the Memory Module

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).

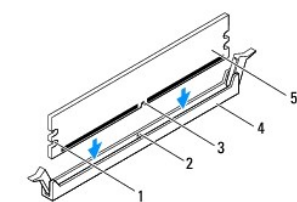
- CAUTION:** To prevent damage to the memory module connector, do not use tools to spread the memory module securing clips.
6. Use your fingertips to carefully spread apart the securing clips on each end of the memory-module connector until the memory module pops up.
  7. Remove the memory module from the memory-module connector.



1	memory-module connector	2	securing clips (2)
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### Replacing the Memory Module

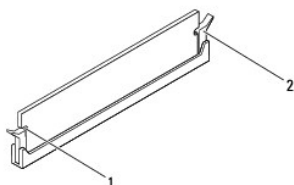
1. Follow the procedures in [Before You Begin](#).
2. Align the notch on the memory module with the tab on the memory-module connector.



1	cutouts (2)	2	tab
3	notch	4	memory-module connector
5	memory module		

3. Insert the memory module into the connector until the memory module snaps into position.  
If you insert the memory module correctly, the securing clips snap into the cutouts at each end of the memory module. If the securing clips do not snap into position, remove the memory module and reinstall it.

 **NOTE:** If the memory module is not installed properly, the computer may not boot.



1	cutouts (2)	2	securing clips (2) (snapped in position)
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4. Replace the drive bay (see [Replacing the Drive Bay](#)).
5. Replace the optical drive (see [Replacing the Optical Drive](#)).
6. Replace the top bracket (see [Replacing the Top Bracket](#)).
7. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

8. Connect your computer and all attached devices to electrical outlets, and then turn them on.  
If the message appears stating that memory size has changed, press <F1> to continue.
9. Log on to your computer.
10. To verify that the memory is installed correctly:

*Windows® XP:*

Click **Start** → **Control Panel** → **System**.

*Windows Vista®:*

Click the **Start** button  → **Control Panel** → **System and Maintenance**.

*Windows 7:*

Click the **Start** button  → **Control Panel** → **System and Security** → **System**.

11. Check the amount of memory (RAM) listed.

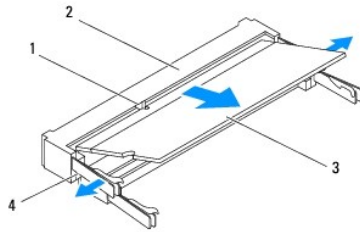
## Inspiron 400

### Removing the Memory Module(s)

1. Follow the procedures in [Before You Begin](#).
2. Remove the bottom cover (see [Removing the Bottom Cover](#)).

 **CAUTION:** To prevent damage to the memory module connector, do not use tools to spread the memory module securing clips.

3. Use your fingertips to carefully spread apart the securing clips on each end of the memory-module connector until the module pops up.
4. Remove the memory module from the memory-module connector.



1	tab	2	memory-module connector
3	memory module	4	securing clips (2)

## Replacing the Memory Module(s)

**CAUTION:** If you need to install memory modules in two connectors, install a memory module in the connector labeled "DIMM 1" before you install a memory module in the connector labeled "DIMM 2."

1. Follow the procedures in [Before You Begin](#).
2. Align the notch in the memory module with the tab in the memory-module connector.
3. Slide the memory module firmly into the slot at a 45-degree angle, and press the memory module down until it clicks into place. If you do not hear the click, remove the memory module and reinstall it.

**NOTE:** If the memory module is not installed properly, the computer may not boot.

4. Replace the bottom cover (see [Replacing the Bottom Cover](#)).

**CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

5. Connect your computer and all attached devices to electrical outlets, and then turn them on. If the message appears stating that memory size has changed, press <F1> to continue.
6. Log on to your computer.
7. To verify that the memory is installed correctly:

*Windows® XP:*

Click **Start** → **Control Panel** → **System**.

*Windows Vista®:*

Click the **Start** button → **Control Panel** → **System and Maintenance**.

*Windows 7:*

Click the **Start** button → **Control Panel** → **System and Security** → **System**.

8. Check the amount of memory (RAM) listed.

# Optical Drive

## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Optical Drive](#)
- [Replacing the Optical Drive](#)

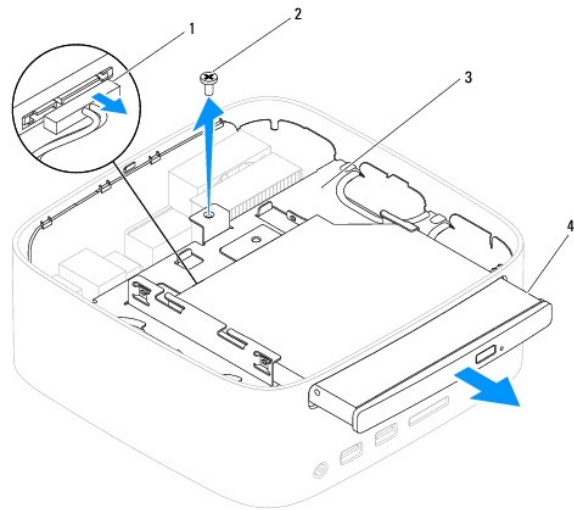
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**CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

**CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Disconnect the optical-drive cable from the connector on the optical drive.
5. Remove the screw that secures the optical drive to the drive bay.
6. Push the optical drive to slide it out from the front of the computer.




1	optical-drive cable connector	2	screw
3	drive bay	4	optical drive

## Replacing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Slide the optical drive into the drive bay.
3. Replace the screw that secures the optical drive to the drive bay.
4. Connect the optical-drive cable to the connector on the optical drive.

5. Replace the top bracket (see [Replacing the Top Bracket](#)).

6. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

7. Connect your computer and all attached devices to electrical outlets, and turn them on.

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## Processor (Inspiron 400 Only)

### Dell™ Inspiron™ 300/400 Service Manual

• [Removing the Processor](#)

• [Replacing the Processor](#)

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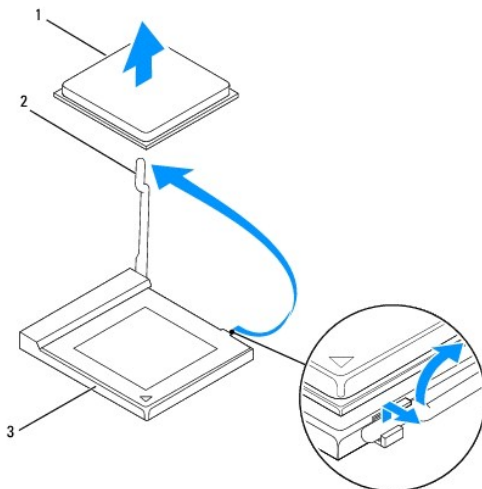
**CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Processor

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).

**CAUTION:** The processor heat sink assembly may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.

7. Press and push the release lever down and out to release it from the tab that secures it.



1	processor	2	release lever
3	processor socket		

**CAUTION:** When removing or replacing the processor, do not touch any of the pins inside the processor socket or allow any objects to fall on the pins in the processor socket.

8. Gently lift the processor to remove it from the socket.  
Leave the release lever extended in the release position so that the socket is ready for the new processor.

---

## Replacing the Processor

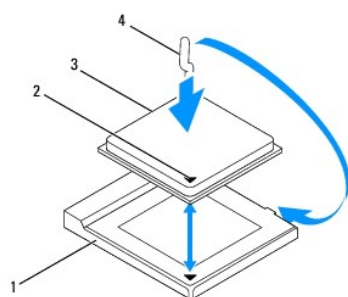
⚠ **CAUTION:** Ground yourself by touching an unpainted metal surface or the computer stand.

⚠ **CAUTION:** When replacing the processor, do not touch any of the pins inside the socket or allow any objects to fall on the pins in the socket.

1. Follow the procedures in [Before You Begin](#).
2. Unpack the new processor, being careful not to touch the underside of the processor.

⚠ **CAUTION:** You must position the processor correctly in the socket to avoid permanent damage to the processor and the computer when you turn on the computer.

3. Lift the release lever to the release position so that the processor socket is ready for the new processor.



1	processor socket	2	processor pin-1 indicator
3	processor	4	release lever

4. Ensure that the release lever on the processor socket is fully extended.

⚠ **CAUTION:** Socket pins are delicate. To avoid damage, ensure that the processor is aligned properly with the processor socket, and do not use excessive force when you install the processor. Be careful not to touch or bend the pins on the system board.

⚠ **CAUTION:** You must position the processor correctly in the processor socket to avoid permanent damage to the processor.

5. Orient the front and rear alignment notches on the processor with the front and rear alignment notches on the processor socket.
6. Align the pin-1 corners of the processor and processor socket.
7. Place the processor lightly in the processor socket and ensure that the processor is positioned correctly.
8. Pivot the processor socket release lever back towards the processor socket, and snap it into place to secure the processor.
9. Clean the thermal grease from the bottom of the heat sink.

⚠ **CAUTION:** Ensure that you apply new thermal grease. New thermal grease is critical for ensuring adequate thermal bonding, which is a requirement for optimal processor operation.


10. Apply the new thermal grease to the top of the processor.

⚠ **CAUTION:** Ensure that the processor heat sink is correctly seated and secure.

11. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
12. Replace the drive bay (see [Replacing the Drive Bay](#)).



13. Replace the optical drive (see [Replacing the Optical Drive](#)).
14. Replace the top bracket (see [Replacing the Top Bracket](#)).
15. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

16. Connect your computer and all attached devices to electrical outlets, and then turn them on.
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## Power-Button Bracket

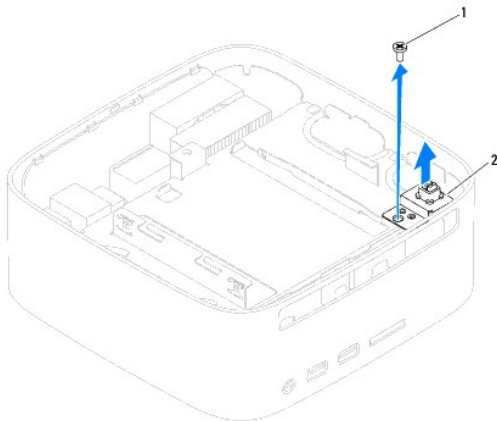
### Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Power-Button Bracket](#)
- [Replacing the Power-Button Bracket](#)

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- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
- 

## Removing the Power-Button Bracket

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the screw that secures the power-button bracket to the drive bay.




1	screw	2	power-button bracket
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6. Remove the drive bay (see [Removing the Drive Bay](#)).
  7. Disconnect the power-button cable from the connector on the system board.
  8. Lift the power-button bracket along with the power-button cable away from the computer.
- 

## Replacing the Power-Button Bracket

1. Follow the procedures in [Before You Begin](#).
2. Connect the power-button cable to the connector on the system board.
3. Replace the drive bay (see [Replacing the Drive Bay](#)).
4. Replace the screw that secures the power-button bracket to the drive bay.

5. Replace the optical drive (see [Replacing the Optical Drive](#)).
6. Replace the top bracket (see [Replacing the Top Bracket](#)).
7. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

8. Connect your computer and all attached devices to electrical outlets, and turn them on.

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# Chassis Fan

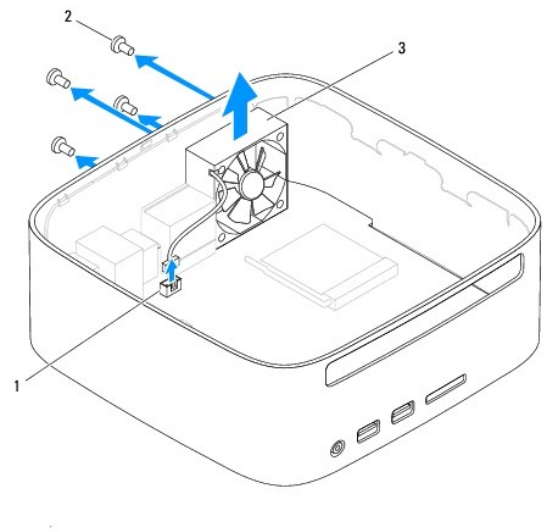
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Chassis Fan](#)
- [Replacing the Chassis Fan](#)

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- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

## Removing the Chassis Fan

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
5. Disconnect the chassis fan cable from the connector on the system board.
6. Remove the four screws that secure the chassis fan to the I/O bracket.
7. Lift the chassis fan away from the computer.




1	chassis fan cable connector	2	screws (4)
3	chassis fan		

## Replacing the Chassis Fan

1. Follow the procedures in [Before You Begin](#).
2. Align the screw holes on the chassis fan with the screw holes on the I/O bracket.

3. Replace the four screws that secure the chassis fan to the I/O bracket.
4. Connect the chassis fan cable to the connector on the system board.
5. Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
6. Replace the top bracket (see [Replacing the Top Bracket](#)).
7. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

8. Connect your computer and all attached devices to electrical outlets, and turn them on.





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## System Board

### Dell™ Inspiron™ 300/400 Service Manual

- [Removing the System Board](#)
- [Replacing the System Board](#)
- [Entering the Service Tag in the BIOS](#)


-  **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
-  **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
-  **CAUTION:** Handle components and cards by their edges, and avoid touching pins and contacts.

The system board's BIOS chip contains the Service Tag, which is also visible on a barcode label on the computer. The replacement kit for the system board includes a CD that provides a utility for transferring the Service Tag to the replacement system board.

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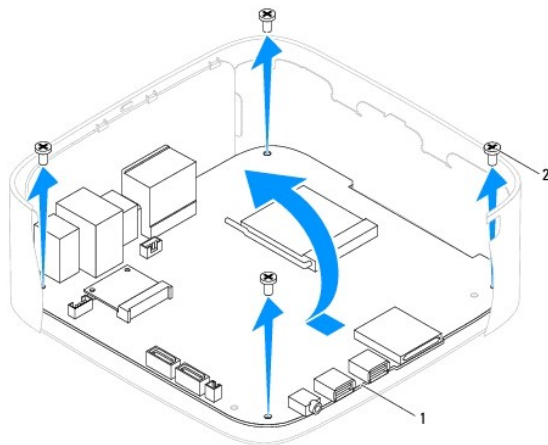
## Removing the System Board

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the bottom cover (see [Removing the Bottom Cover](#)).
5. Remove the optical drive (see [Removing the Optical Drive](#)).
6. Remove the drive bay (see [Removing the Drive Bay](#)).
7. Remove the coin-cell battery (see [Removing the Coin-Cell Battery](#)).
8. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
9. Remove the chassis fan (see [Removing the Chassis Fan](#)).
10. Remove the I/O bracket (see [Removing the I/O Bracket](#)).
11. Remove the memory module(s) (see [Memory Module\(s\)](#)).
12. *For Inspiron 400 Only:*
  - a. Remove the Mini-Card (see [Removing the Mini-Card](#)).
  - b. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).
  - c. Remove the processor (see [Removing the Processor](#)).

 **NOTE:** Make note of the cable routing before disconnecting the cables from the system board.

  - d. Remove the graphics-card heat sink (see [Removing the Graphics-Card Heat Sink](#)).
  - e. Remove the graphics card (see [Removing the Graphics Card](#)).
  - f. Remove the graphics-card fan (see [Removing the Graphics-Card Fan](#)).
13. Disconnect all the cables connected to the system board.
14. Remove the four screws that secure the system board to the chassis.
15. Push the system board from the bottom to release the system board from the chassis.
16. Slide the system board to the back of the chassis to release the connectors on the system board from the slots on the chassis.

17. Lift the system board away from the computer.




1	system board	2	screws (4)
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## Replacing the System Board

1. Follow the procedures in [Before You Begin](#).
2. Align the connectors on the system board with the slots on the chassis and slide the system board in place.
3. Replace the four screws that secure the system board to the chassis.
4. *For Inspiron 400 Only:*
  - a. Replace the graphics-card fan (see [Replacing the Graphics-Card Fan](#)).
  - b. Replace the graphics card (see [Replacing the Graphics Card](#)).
  - c. Replace the graphics-card heat sink (see [Replacing the Graphics-Card Heat Sink](#)).
  - d. Replace the processor (see [Replacing the Processor](#)).
  - e. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
  - f. Replace the Mini-Card (see [Replacing the Mini-Card](#)).
5. Connect all the cables to the system board.
6. Replace the memory module(s) (see [Memory Module\(s\)](#)).
7. Replace the I/O bracket (see [Replacing the I/O Bracket](#)).
8. Replace the chassis fan (see [Replacing the Chassis Fan](#)).
9. Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
10. Replace the coin-cell battery (see [Replacing the Coin-Cell Battery](#)).
11. Replace the drive bay (see [Replacing the Drive Bay](#)).
12. Replace the optical drive (see [Replacing the Optical Drive](#)).
13. Replace the bottom cover (see [Replacing the Bottom Cover](#)).
14. Replace the top bracket (see [Replacing the Top Bracket](#)).
15. Replace the top cover (see [Replacing the Top Cover](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

16. Turn on the computer.

 **NOTE:** After you have replaced the system board, enter the computer's Service Tag into the BIOS of the replacement system board.

17. Enter the Service Tag (see [Entering the Service Tag in the BIOS](#)).

---

## Entering the Service Tag in the BIOS

1. Turn on the computer.
  2. Press <F2> during POST to enter the system setup program.
  3. Navigate to the main tab and enter the service tag in the **Service Tag Setting** field.
- 

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## System Setup Utility


### Dell™ Inspiron™ 300/400 Service Manual


- [Overview](#)
- [Clearing Forgotten Passwords and CMOS Settings](#)
- [Flashing the BIOS](#)

## Overview

Use system setup utility to:


- 1 Change the system configuration information after you add, change, or remove any hardware in your computer
- 1 Set or change a user-selectable option such as the user password
- 1 Read the current amount of memory or set the type of hard drive installed

 **CAUTION:** Unless you are an expert computer user, do not change the settings for this program. Certain changes can make your computer work incorrectly.

 **NOTE:** Before you change system setup, it is recommended that you write down the system setup screen information for future reference.

## Entering System Setup Utility

1. Turn on (or restart) your computer.
2. When the DELL™ logo is displayed, watch for the F2 prompt to appear and then press <F2> immediately.


 **NOTE:** The F2 prompt indicates that the keyboard has initialized. This prompt can appear very quickly, so you must watch for it, and then press <F2>. If you press <F2> before the F2 prompt, this keystroke will be lost. If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop. Then, shut down your computer (see [Turning Off Your Computer](#)) and try again.

## System Setup Screens

The system setup screen displays current or changeable configuration information for your computer. Information on the screen is divided into three areas: the **setup item**, active **help screen**, and **key functions**.

<p><b>Setup Item</b> — This field appears on the left side of the system setup window. The field is a scrollable list containing features that define the configuration of your computer, including installed hardware, power conservation, and security features.</p> <p>Scroll up and down the list with the up- and down-arrow keys. As an option is highlighted, the <b>Help Screen</b> displays more information about that option and available settings.</p>	<p><b>Help Screen</b> — This field appears on the right side of the system setup window and contains information about each option listed in the <b>Setup Item</b>. In this field you can view information about your computer and make changes to your current settings.</p> <p>Press the up-arrow and down-arrow keys to highlight an option. Press &lt;Enter&gt; to make that selection active and return to the <b>Setup Item</b>.</p> <p><b>NOTE:</b> Not all settings listed in the <b>Setup Item</b> are changeable.</p>
<p><b>Key Functions</b> — This field appears below the <b>Help Screen</b> and lists keys and their functions within the active system setup field.</p>	

## System Setup Options

 **NOTE:** Depending on your computer and installed devices, the items listed in this section may appear, or may not appear exactly as listed.

System Info	
System	Displays the system name
BIOS Version	Displays the BIOS version number
Service Tag	Displays the service tag of the computer when the service tag is present
Asset Tag	Displays the asset tag of the computer when the asset tag is present
Processor Type	Displays the processor information
Processor L2 Cache	Displays the L2 cache size
Memory Installed	Indicates the amount of memory installed in MB

Memory Speed	Indicates the memory speed in MHz
Memory Technology	Indicates the type of installed memory
<b>Main</b>	
Service Tag Setting	Displays the service tag of the computer if the service tag is present or provides a field to input the service tag manually when the service tag is absent
System Time	Displays current time in hh:mm:ss format
System Date	Displays the current date in mm/dd/yy format
SATA-0	Displays the SATA drive connected to the SATA-0 connector
SATA-1	Displays the SATA drive connected to the SATA-1 connector
eSATA-0 (applicable for Inspiron 400 computer only)	Displays the eSATA drive connected to the eSATA-0 connector
eSATA-1 (applicable for Inspiron 400 computer only)	Displays the eSATA drive connected to the eSATA-1 connector
Keyboard Errors	Displays keyboard errors when set to Report Default is Report
<b>Advanced Settings</b>	
Inspiron 300	
CPU Feature	<ul style="list-style-type: none"> <li>1 Limit CPUID Value—Enabled or Disabled (Disabled by default)</li> <li>1 CPU XD Support—Enabled or Disabled (Enabled by default)</li> <li>1 Hyper-Threading Technology—Enabled or Disabled (Enabled by default)</li> <li>1 Virtualization (Hidden if CPU is not supported)—Enabled or Disabled (Enabled by default)</li> </ul>
Integrated Graphics Configuration	<ul style="list-style-type: none"> <li>1 DVMT Mode Select—DVMT Mode</li> <li>1 DVMT/FIXED Memory—128 MB</li> </ul>
Integrated Peripherals Configuration	<ul style="list-style-type: none"> <li>1 Onboard Audio Controller—Enabled or Disabled (Enabled by default)</li> <li>1 Onboard LAN Controller—Enabled or Disabled (Enabled by default)</li> <li>1 Onboard LAN Boot ROM—Enabled or Disabled (Disabled by default)</li> </ul>
Inspiron 400	
CPU Feature	<ul style="list-style-type: none"> <li>1 Secure Virtual Machine Mode—Enabled or Disabled (Enabled by default)</li> <li>1 AMD Cool 'N' Quiet—Enabled or Disabled (Enabled by default)</li> </ul>
Integrated Graphics Configuration	UMA Frame Buffer Size—Auto, 32 MB, 64 MB, 128 MB, 256 MB, or 512 MB (Auto by default)
Integrated Peripherals Configuration	<ul style="list-style-type: none"> <li>1 Onboard SATA Controller—Enabled or Disabled (Enabled by default)</li> <li>1 SATA Mode—ATA or AHCI (AHCI by default)</li> <li>1 Onboard Audio Controller—Enabled or Disabled (Enabled by default)</li> <li>1 Onboard LAN Controller—Enabled or Disabled (Enabled by default)</li> <li>1 Onboard LAN Boot ROM—Enabled or Disabled (Disabled by default)</li> </ul>
USB Device Setting	<ul style="list-style-type: none"> <li>1 USB Controller—Enabled or Disabled (Enabled by default)</li> <li>1 USB Operation Mode (Appears when "USB Controller" is enabled)—FullSpeed or HiSpeed (HiSpeed by default)</li> </ul>
Numlock Key	On or Off (On by default)
Fast Boot	Enabled or Disabled (Enabled by default)
<b>Power Management</b>	
ACPI Suspend Type	Specifies the suspend type Default is S3
AC Recovery	Power Off, Power On, or Last Power State (Off by default)
Low Power Mode (applicable for Inspiron 400 computer only)	Enabled or Disabled (Enabled by default)
Remote Wake Up	Enabled or Disabled (Enabled by default)
Auto Power On	Enabled or Disabled (Disabled by default)
Auto Power On Date (Displays only when "Auto Power On" is set to Enabled)	Specifies the power on date Default is 15
Auto Power On Time (Displays only when "Auto Power On" is set to Enabled)	Specifies the power on time Default is 12:30:30
<b>Security Settings</b>	
Unlock Setup Status	Unlocked
Supervisor Password	Status of supervisor password installed


User Password	Status of user password installed
<b>Boot Sequence</b>	
1st Boot Device	Specifies the boot sequence from the available devices Hard Disk; USB; CD/DVD; Removable; Network; Disabled (Hard Disk by default)
2nd Boot Device	Specifies the boot sequence from the available devices Hard Disk; USB; CD/DVD; Removable; Network; Disabled (USB by default)
3rd Boot Device	Specifies the boot sequence from the available devices Hard Disk; USB; CD/DVD; Removable; Network; Disabled (CD/DVD by default)
4th Boot Device	Specifies the boot sequence from the available devices Hard Disk; USB; CD/DVD; Removable; Network; Disabled (Removable by default)
5th Boot Device	Specifies the boot sequence from the available devices Hard Disk; USB; CD/DVD; Removable; Network; Disabled (Network by default)
Hard Disk Drives	Specifies the boot device priority sequence from the available hard disk drives
USB Drives	Specifies the boot device priority sequence from the available USB drives
CD/DVD Drives	Specifies the boot device priority sequence from the available CD/DVD drives
Removable Drives	Specifies the boot device priority sequence from the available removable drives
Network Drives	Specifies the boot device priority sequence from the available network drives
<b>Exit</b>	
Exit Options	Provides options to <b>Save Changes and Exit</b> , <b>Discard Changes and Exit</b> , and <b>Load Default Setting</b>

## Boot Sequence

This feature allows you to change the boot sequence for devices.

### Boot Options

1. **Hard Drive** — The computer attempts to boot from the primary hard drive. If no operating system is on the drive, the computer generates an error message.
1. **USB Flash Device** — Insert the memory device into a USB port and restart the computer. When **F12 Boot Options** appears in the lower-right corner of the screen, press <F12>. The BIOS detects the device and adds the USB flash option to the boot menu.

 **NOTE:** To boot to a USB device, the device must be bootable. To ensure that your device is bootable, check the device documentation.

1. **CD/DVD Drive** — The computer attempts to boot from the CD/DVD drive. If no CD/DVD is in the drive, or if the CD/DVD has no operating system, the computer generates an error message.

### Changing Boot Sequence for the Current Boot

You can use this feature to change the current boot sequence, for example, to boot from the CD/DVD drive to run the Dell Diagnostics on the *Drivers and Utilities* media. On completion of diagnostic tests, the previous boot sequence is restored.

1. If you are booting to a USB device, connect the USB device to a USB connector.
2. Turn on (or restart) your computer.
3. When **F2 = Setup**, **F12 Boot Options** appears in the lower-right corner of the screen, press <F12>.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop. Then shut down your computer and try again.

The **Boot Device Menu** appears, listing all available boot devices.


4. On the **Boot Device Menu** choose the device you want to boot from.

For example, if you are booting to a USB memory key, highlight **USB Flash Device** and press <Enter>.

 **NOTE:** To boot to a USB device, the device must be bootable. To ensure your device is bootable, check the device documentation.

## Changing Boot Sequence for Future Boots


1. Enter system setup utility (see [Entering System Setup Utility](#)).
2. Use the arrow keys to highlight the **Boot** menu option and press <Enter> to access the menu.


 **NOTE:** Write down your current boot sequence in case you want to restore it.

3. Press the up- and down-arrow keys to move through the list of devices.
4. Press plus (+) or minus (-) to change the boot priority of the device.


---


## Clearing Forgotten Passwords and CMOS Settings

 **WARNING:** Before you begin any of the procedures in this section, follow the safety instructions that shipped with your computer.

 **WARNING:** The computer must be disconnected from the electrical outlet to clear the CMOS setting.

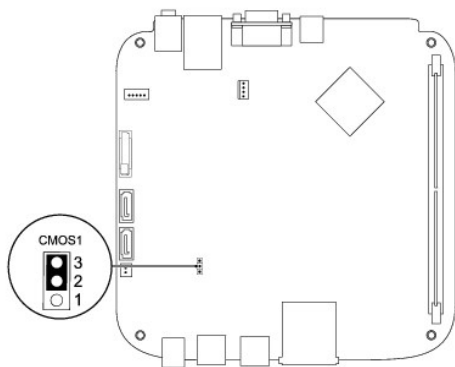
 **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

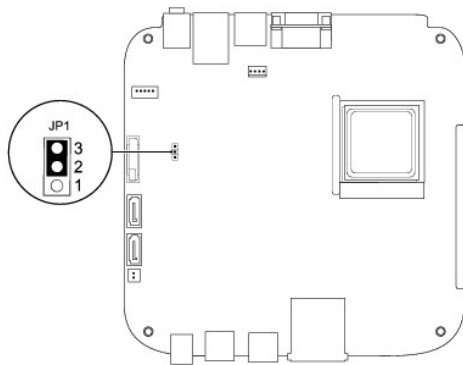
 **CAUTION:** Clearing the CMOS settings will also clear the password.

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Locate the 3-pin CMOS connector on the system board (see [System Board Components](#)).
7. Remove the 2-pin jumper plug from pins 2 and 3 and fix it on pins 1 and 2.
8. Wait for approximately five seconds to clear the CMOS setting.
9. Remove the 2-pin jumper plug from pins 1 and 2 and replace it on pins 2 and 3.

## Inspiron 300



## Inspiron 400



10. Replace the drive bay (see [Replacing the Drive Bay](#)).
11. Replace the optical drive (see [Replacing the Optical Drive](#)).
12. Replace the top bracket (see [Replacing the Top Bracket](#)).
13. Replace the top cover (see [Replacing the Top Cover](#)).

**CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

14. Connect your computer and devices to electrical outlets, and turn them on.

---

## Flashing the BIOS

1. Turn on the computer.
2. Go to the Dell Support website at [support.dell.com](http://support.dell.com).
3. Click **Drivers & Downloads**→ **Select Model**.
4. Locate the BIOS update file for your computer:

**NOTE:** The Service Tag for your computer is located at the bottom of the computer.

If you have your computer's Service Tag:

- a. Click **Enter a Service Tag**.
- b. Enter your computer's Service Tag in the **Enter a service tag:** field, click **Go**, and proceed to [step 5](#).

If you do not have your computer's Service Tag:

- a. Select the type of product in the **Select Your Product Family** list.
- b. Select the product brand in the **Select Your Product Line** list.
- c. Select the product model number in the **Select Your Product Model** list.

**NOTE:** If you have selected a different model and want to start over again, click **Start Over** on the top right of the menu.

- d. Click **Confirm**.
5. A list of results appear on the screen. Click **BIOS**.
6. Click **Download Now** to download the latest BIOS file. The **File Download** window appears.
7. Click **Save** to save the file on your desktop. The file downloads to your desktop.

8. Click **Close** if the **Download Complete** window appears.  
The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.
9. Double-click the file icon on the desktop and follow the instructions on the screen.

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# Technical Overview

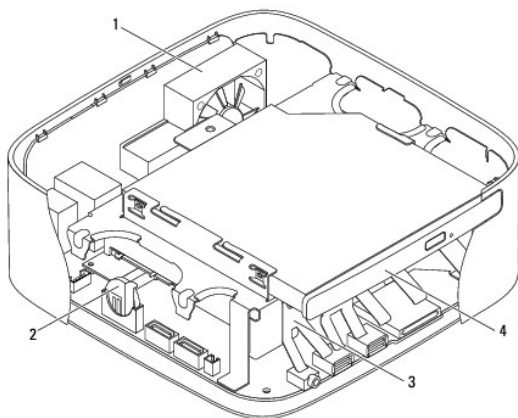
## Dell™ Inspiron™ 300/400 Service Manual

- [Inspiron™ 300](#)
- [Inspiron 400](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
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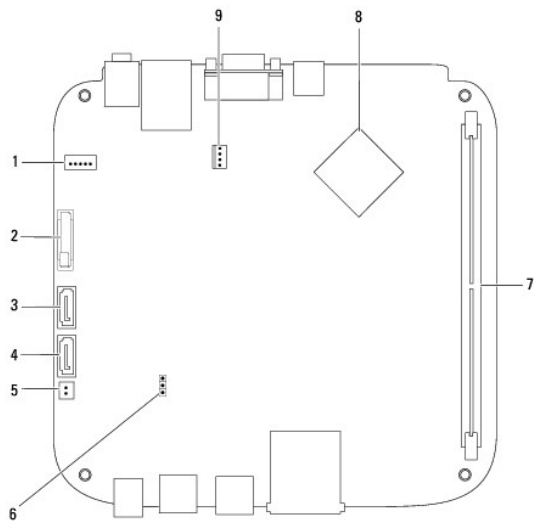
## Inspiron™ 300

### Inside View



1	chassis fan	2	coin-cell battery
3	drive bay	4	optical drive

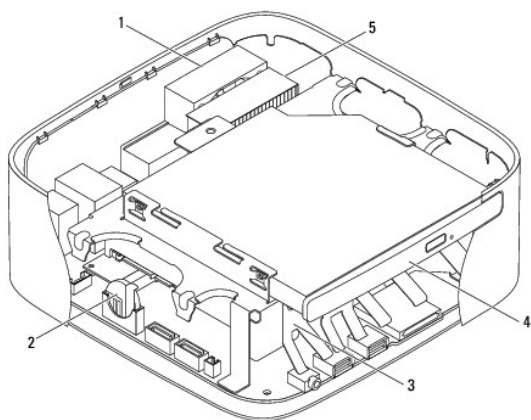
### System Board Components



1	SATA power connector (SATAPWR1)	2	coin-cell battery socket (BAT1)
3	SATA drive connector (SATA2)	4	SATA drive connector (SATA1)
5	optical drive power connector (ODD_PWR1)	6	CMOS jumper (CMOS1)
7	memory-module connector (DIMM1)	8	processor
9	chassis fan connector (SYSFAN1)		

## Inspiron 400

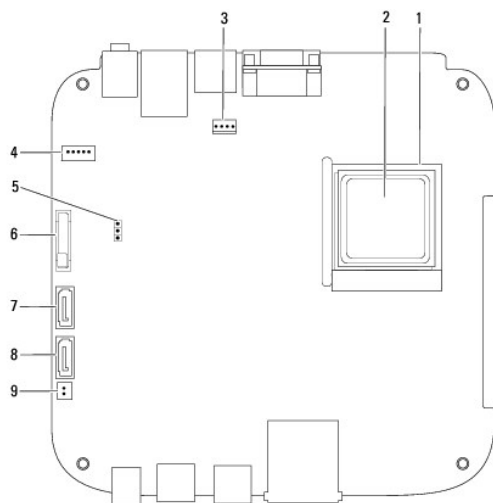
### Inside View



1	chassis fan	2	coin-cell battery
3	drive bay	4	optical drive
5	processor heat sink		

### System Board Components





1	processor socket	2	processor
3	chassis fan connector (CPU_FAN)	4	SATA power connector (SATAPWR1)
5	CMOS jumper (JP1)	6	coin-cell battery socket (BT1)
7	SATA drive connector (SATA2)	8	SATA drive connector (SATA1)
9	SATA power connector (SATAPWR2)		

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## **Dell™ Inspiron™ 300/400 Service Manual**



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



**WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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September 2009 Rev. A00

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# Top Bracket

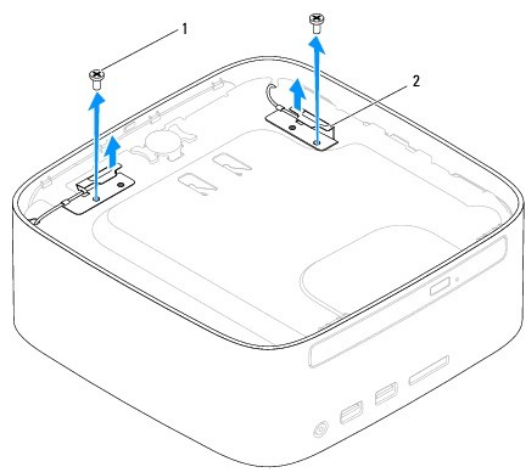
## Dell™ Inspiron™ 300/400 Service Manual

- [Removing the Top Bracket](#)
- [Replacing the Top Bracket](#)

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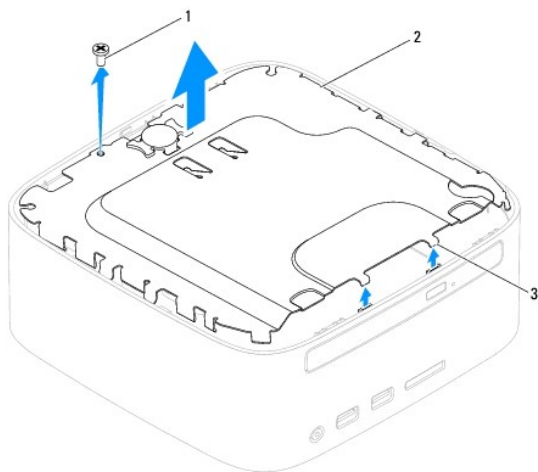
## Removing the Top Bracket

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. *Inspiron 400* — Remove the two screws that secure the wireless antennas to the top bracket.



1	screws (2)	2	wireless antennas (2)
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4. Remove the screw that secures the top bracket to the chassis.
5. Lift the top bracket away from the computer.



1	screw	2	top bracket
3	tabs (2)		

---

## Replacing the Top Bracket

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the top bracket with the slots on the chassis and place the top bracket.
3. Replace the screw that secures the top bracket to the computer.
4. *Inspiron 400* — Align the screw holes on the wireless antennas with the screw holes on the top bracket. Replace the two screws that secure the wireless antennas to the top bracket.
5. Replace the top cover (see [Replacing the Top Cover](#)).

**CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

6. Connect your computer and all attached devices to electrical outlets, and turn them on.

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# Top Cover

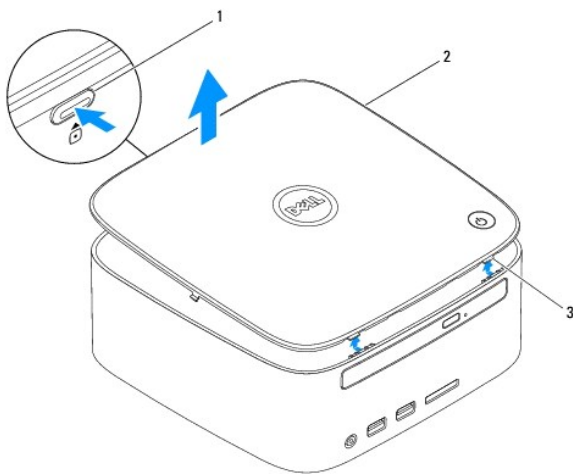
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- 

## Removing the Top Cover

1. Follow the procedures in [Before You Begin](#).
2. Press the top cover release button at the back of the computer. The top cover will pop up.
3. Lift the top cover away from the computer.



1	top cover release button	2	top cover
3	tabs (2)		

## Replacing the Top Cover

1. Follow the procedures in [Before You Begin](#).
  2. Align the tabs on the top cover with the slots on the computer and snap the top cover into place.
-